Investigating e-Penalty for Managing and Improving Regional Transport Office (e-PMIRTO) Using Information and Communication Technology (I.C.T.)

A Synopsis

Submitted in

partial fulfillment for the degree

of

Doctor of Philosophy

(Computer Science and Information Technology)

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MARCH-2011-2012

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1. INTRODUCTION:

The topic of this synopsis "Investigating e-penalty for managing and improving the Regional Transport Office (e-PMIRTO) using Information and communication Technology (ICT)" is related to Ministry of Road Transport and Highway (MRTH), Govt of India. During Literature survey it was found that so many projects have been successfully developed by NeGP (National e-Government Action Plan) in G2C, G2B, C2G and G2C domain. NeGP with NIC (National Informatics centre) has successfully developed the project SAARATHI AND VAHAN in all state and UT (Union Territory).SAARATHI and VAHAN handles DL (Driving License) and Vehicle related issues like RC (Registration certificate) which are given now in the form of Smart Card which store all the data related to the Driver and Vehicle. Research thrust was found in the area of Transportation specially to control the Road and traffic related offences like jumping the signals, changing the lane, parking in prohibited area, repetition of the offences etc.This area of research comes under the e-Governance. e- Government and e-Governance are the two terms; E governance is the superset of E-Government.

1.1 Meaning of e-Government

E-government is understood as the use of Information and Communication Technology (ICT) to promote more efficient and cost effective government, facilitate more convenient government services and allow greater public access to information, and make government more accountable to citizens.

1.2 Meaning of e-Governance

E-governance is a wider term which covers the state's institutional arrangements, decision making processes, implementation capacity and the relationship between government officials and the public. E-governance is the use

of ICT by the government, civil society and political institutions to engage citizens to promote their greater participation in the process of governance. Thus, e-government can be viewed as a subset of e-governance, and its focus is largely on improving administrative efficiency and reducing administrative corruption.

Good governance is being recognized as an important goal by many countries across the world. E-Governance can be visualized as follows:

Definition 1.

"A transparent smart e-Governance with seamless access, secure and authentic flow of information crossing the interdepartmental barrier and providing a fair and unbiased service to the citizen."

Definition 2.

E-governance is the application of information & communication technologies to transform the efficiency, effectiveness, transparency and accountability of informational & transactional exchanges with in government, between govt. & govt. agencies of National, State, Municipal & Local levels, citizen & businesses, and to empower citizens through access & use of information.

1.3 SCOPE OF E-GOVERNANCE:

1. GOVERNMENT TO CITIZEN (G2C):

G2C will aim at connecting citizens to government by talking to citizens and supporting accountability, by listening to citizens and supporting democracy, and by improving public services. It will involve better services to the citizens through single point delivery mechanism and will involve areas like:

1.1 E-Citizen

1.2 E-Transport

1.3 E-Medicine

1.4 E-Education

1.5 E-Registration

The spirit behind G2C services will encompass all the services that the Government is delivering to its citizens.

2. <u>CONSUMER TO GOVERNMENT (C2G):</u>

C2G will mainly constitute the areas where the citizen interacts with the Government. It will include areas like election when citizens vote for the Government; Census where he provides information about himself to the Government; taxation where he is paying taxes to the Government.

2.1 E-Democracy

2.2 E-Voting

3. <u>GOVERNMENT TO GOVERNMENT (G2G):</u>

This can also be referred as ***e-Administration.*** It involves improving government processes by cutting costs, by managing performance, by making strategic connections within government, and by creating empowerment. It will involve networking all Government offices so as to produce synergy among them. G to G sector represents the backbone of e-government. The major areas are:

3.1 E-Secretariat

3.2 E-Police

3.3 E-Court

4. <u>GOVERNMENT TO BUSINESS (G2B):</u>

This will constitute the various services a business house needs to get from the Government, which includes getting licenses etc. In a similar scenario, it can also flow from a business house to the Government as in the case of procurements, from such business houses by the Government. This will become a B2G service.

4.1 E-Taxation

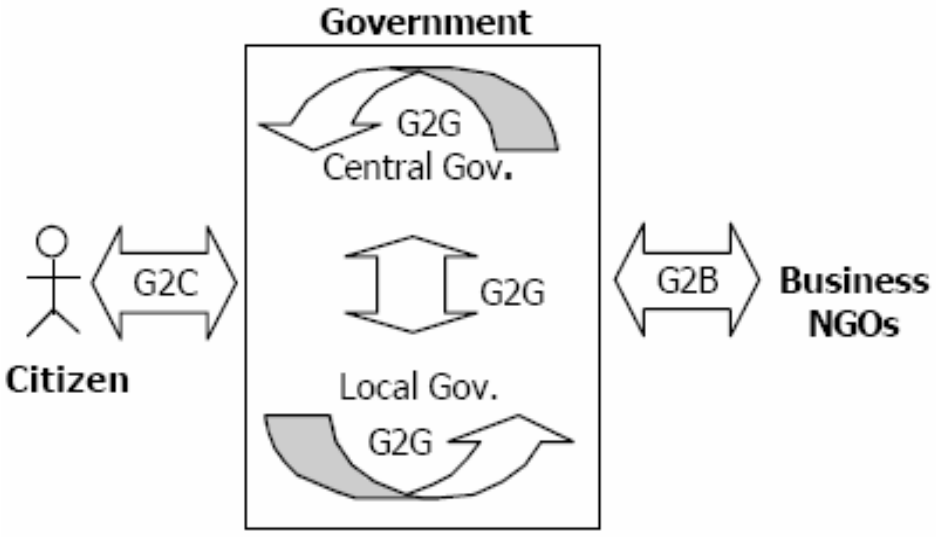
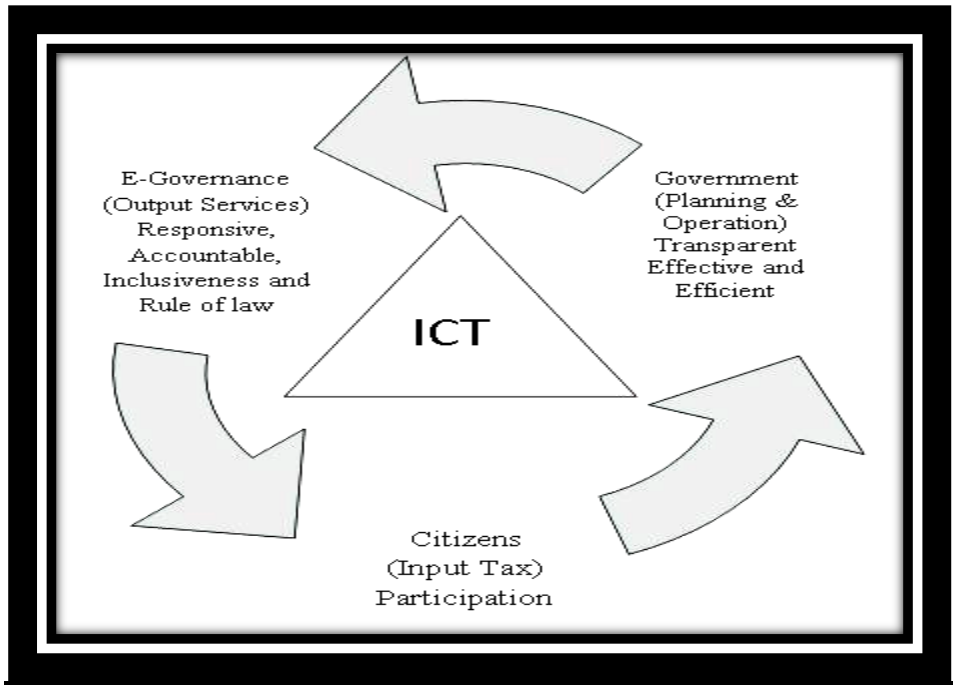


Diagram of Scope of e-Governance

1.4 CONCETUAL MODEL OF e-GOVERNANCE:



2. OBJECTIVE OF STUDY

As we know that an effective e-Governance will provide an efficient solution for most of the problems in many government and public sectors in India. Transportation sector is not the exception for the e-Governance. The use of Information and communication technology (ICT) in Transport sector causes drastic change in the exploration of various services, provided by Vahan and Sarathi projects.

Vahan project supports all transactions related to vehicles such as issue registration certificate (RC), fitness certificate, receipts and permits etc, whereas Sarathi issue's Learner Licence, Permanent Driving Licence (DL) and conductor licence to the applicants which is a G2C e- Governance and citizen are using it very effectively.

Now a day's Society is facing a problem of rapid accidents and human loss. It has been observed that Road accidents are taking place frequently due to rash driving, jumping of the signal, cross the speed limit of vehicle, change the lane on the road. Drivers do not follow the traffic rules. Government is planning to install the high power cameras at every place in a city to control the terrorism. Implementation of installing the Cameras can also be utilised for identifying such vehicles on the road which violate the rules of Traffic and can be penalised under Regional Transport Authority (RTO) who handles issuing of RC and DL.

Proposed research is undertaking to control the violation of Traffic rules by citizens with the help of e-Governance and Information and Communication Technology (ICT) by identifying the vehicle through Installed cameras and penalize them through ECS (**Electronic Clearance System).**The Objective of this initiate would be-

1. More revenue can be generated for the Government which was not possible earlier because in such cases the officer takes the bribe and amount does not go in government hand.

2. There will be a little chance of accidents and human loss.

3. Corruption: bribes have either been eliminated or significantly reduced.

4. Citizens will not be harassed by the Traffic Control Officer which is a very general case.

5. If a Vehicle caught more than one time in violation of Traffic rule it can be penalised two or more fold the previous amount which is not possible in present scenario.

6. Paper work will be reduced.

7. Citizens do not require to go in Traffic Chowky to collect their DL.

2.1 PROBLEM DEFINITION:

Primary Objective of proposed research is to penalize the defenders directly from their bank account. If a person violates any rule of Traffic then any offence will be captured through the installed enforcement cameras and the data (Vehicle registration No) will be transferred to SDC (State Data Centre).After Identifying the owner of vehicle, SMS will be sent to the owner stating that the Amount (actual amount) will be deducted from your account due to this offence (name of the offence) at the same moment as he does any offence.

Secondary objective of this proposed research is to save human life by controlling such offences which cause road accidents and human loss. Another objective is to generate more revenue to Government and stop corruption.

3. REVIEW OF LITERATURE:

Now a day's e-Governance is affecting every facet of state Government and public sectors as in [1], Transport sector is also enhancing or reengineering their administrative and service delivery mechanism by using effective ICT technologies such as e-Governance. Transport sector provides two successful G-C Projects to the society. The **VAHAN and SARATHI** [2] projects in the Transport sector are running successfully in many states of the India. Vahan project is dedicated for all the transactions or processing regarding vehicles whereas Sarathi is related to driving licence and other activities. All state's Governments provide e-Governance services through their Vahan project only. But this development in the transport sector is not sufficient. According to the service delivery process, we can divide the Transport sector in three major unit's i.e. State Transport Authority (STA), Roads and Public Road Transport Corporations. Vahan which provides issuing of Registration Certificate (R.C.) of Vehicles is handled by Regional Transport Officer (RTO).

NATIONAL e-GOVERNANCE PLAN (NeGP)

The Government of India has launched the National e-Governance Action Plan (NeGP) with the intent to support the growth of e-governance within the country. The Plan envisages creation of right environments to implement G2G, G2B, G2E and G2C services.

NeGP comprises of 27 Mission Mode Projects (MMPs) encompassing 10 Central MMPs, 10 State MMPs and 7 Integrated MMPs spanning multiple Ministries/ Departments.

Central MMPs	State MMPs	Integrated MMPs
Banking Central Excise & Customs Income Tax (IT) Insurance MCA21 National Citizen Database Passport Immigration, Visa and Foreigners Registration& Tracking Pension e-Office	Agriculture Commercial Taxes e–District Employment Exchange Land Records Municipalities Gram Panchayats Police Road Transport Treasuries	CSC e-Biz e-Courts e-Procurement EDI For eTrade National e-governance Service Delivery Gateway India Portal

On line Services under National e-Governance Plan

❖ Income Tax

- E-Filing of Income Tax Returns
- Online Registration of E-Return Intermediary
- Online Application for Permanent Account Number (PAN) ,Check Status of PAN Application Online
- Online Application for Tax Deduction Account Number (TAN)

❖ Passport/VISA

- Online Status Enquiry of Passport Application

❖ Company Affairs

- Online Company Directory ,Lodge Investor Complaint Online

❖ Central Excise

- Registration for Service Tax Payers
- Registration for Central Excise Assesses
- Know your Service Tax Tariff
- Know your Service Tax Location Code
- e-filing of Central Excise Returns
- e-filing of Service Tax Returns

❖ Pensions

- Online Pension Payment Order (PPO) Status Enquiry

❖ Land Records

- Check your Land Registration Records

❖ Road Transport

- Obtain Driving Licence
- Vehicle Regsitration

❖ **Property Registration**

- Land/Property Registration

❖ **Agriculture**

- Check Agricultural Market Prices Online

❖ **Municipalities**

- Obtain Birth Certificate
- Obtain Death Certificate

❖ **Gram Panchayats (Rural)**

- Online Collection and Sale of Handicrafts by Rural Artisans

❖ **Police**

- Online Status of Stolen Vehicles

❖ **Employment Exchange**

- Register with State Employment Exchanges as a candidate
- Register with State Employment Exchanges as an Employer

State wise list of e-government schemes in India

State/Union Territory	Initiatives covering departmental automation, user charge collection,delivery of policy/programme information and delivery of entitlements
Andhra Pradesh	e-Seva, CARD, VOICE, MPHS, FAST, e-Cops, AP online—One-stopshop on the Internet, Saukaryam, Online Transaction processing
Bihar	Sales Tax Administration Management Information
Chattisgarh	Chhattisgarh Infotech Promotion Society, Treasury office, e-linking project
Delhi	Automatic Vehicle Tracking System, Computerisation of website of RCS office, Electronic Clearance System, Management Information System for Education etc
Goa	Dharani Project
Gujarat	Mahiti Shakti, request for Government documents online, Form book online, G R book online, census online, tender notice
Haryana	Nai Disha
Himachal Pradesh	Lok Mitra
Karnataka	Bhoomi, Khajane, Kaveri
Kerala	e-Srinkhala, RDNet, Fast, Reliable, Instant, Efficient Network for the Disbursement of Services (FRIENDS)
Madhya Pradesh	Gyandoot, Gram Sampark, Smart Card in Transport Department, Computerization MP State Agricultural Marketing Board (Mandi Board)etc
Maharashtra	SETU, Online Complaint Management System—Mumbai
Rajasthan	Jan Mitra, RajSWIFT, Lokmitra, RajNIDHI
Tamil Nadu	Rasi Maiyams–Kanchipuram; Application forms related to public utility, tender notices and display
Arunachal Pradesh	Community Information Center. Forms available on Manipur, Meghalaya, the Meghalaya website under schemes related toMizoram & Nagaland social welfare, food civil supplies and consumer affairs, housing transport

4. METHODOLOGY AND PLAN OF WORK:

In planning phase primary data will be collected how the work is done in RTO related to the problem definition, analyse it , on the basis of that model will be constructed and then feasibility of proposed research's objective will be checked out. In next step framework will be decided and models of the problem definition will be designed which will be based on already proven models like banking and online system of such kind.

Proposed Research will be carried out by using the functional Modelling design Techniques. Methodology which will be used in this proposed area is Planning, Analysis, and Exploring, Design the model and architecture and testing them on the basis of proven method. Hence in this work, Models and framework will be designed which can support the objective of the research.

4.1 PLACE OF WORK AND FACILITY AVAILABLE:

VES Institute Of Technology, a Premiere Engineering Institute in Mumbai. MCA Department

Facilities: Well Equipped Laboratories with Internet Facility and a well-established Research and Development Laboratory.

4.2 ACTIVITY PLAN:

Task	Year 1				Year2				Year3			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Literature Survey	⟺											
Planning		⟺										
Analysis of Preliminary Data			⟺									
Designing DFD and Flow Chart				⟺								
Exploratory Study				⟺								
Detailed Study and feasibility					⟺							
Finalizing The Frame work /Design						⟺						
Design The Model							⟺					
Enhance the Model to satisfy the Hypothesis								⟺				
Testing the Model							⟺					
Documentation , Thesis Writing etc									⟺			

5. REFERENCE AND BIBILIOGRAPHY

[1] Hala Al-Khatib, "A Citizen Oriented E-government Maturity Model", Business School Brunel University 24th March, 2009

[2] Siau, K. & Long, "Synthesizing e-government stage models - a meta-synthesis based on meta-ethnography approach", *Industrial Management + Data Systems*, vol. 105, no. 3/4, pp. 443, 2005.

[3] Kunwar Singh Vaisla, Manoj Kumar Bisht, and Durgesh Pant, '"ramework of e-Initiatives for Uttarakhand",*International Journal of Innovation, Management and Technology, Vol. 2, No. 4, August 2011.*

[4] Mrinalini Shah, "E-Governance in India: Dream or reality?", *International Journal of Education and Development using Information and Communication Technology (IJEDICT),* Vol. 3, Issue 2, pp. 125-137, 2007.

[5] Zhiyuan Fang**,** Ph.D. School of Public Administration, National Institute of Development Administration (NIDA),Thailand, *"E-Government in Digital Era: Concept, Practice, and Developmen"t ,International Journal of The Computer, The Internet and Management, Vol. 10, No.2, 2002, p 1-22.*

[6] Ajay Kumar Bharti , Sanjay K. Dwivedi, "E-Governance in Public Transportation: U.P.S.R.T.C.- A Case Study", *International Conference on Software and Computer Applications IPCSIT vol.9) IACSIT Press, Singapore, , 2011.*

[7] http://www.csi-sigegov.org

[8] http://www.it.iitb.ac.in/~prathabk/egovernance/egov_success_stories_gujrat.html

[9] http://www.egov.mit.gov.in

[10] www.e-governance-imp.html

[11]http://www.mit.gov.in/content/national-e-governance-plan

[12]http://www.mit.gov.in/content/mission-mode-projects